

## II. WAGE AND SALARY DISBURSEMENTS

Wage and salary disbursements consist of the monetary remuneration of employees (including the salaries of corporate officers, commissions, tips, bonuses, and severance pay); employee gains from exercising nonqualified stock options; distributions from nonqualified deferred compensation plans; and an imputation for pay-in-kind (such as the meals furnished to the employees of restaurants).

Wage and salary disbursements are measured before deductions, such as social security contributions, union dues, and voluntary employee contributions to defined contribution pension plans such as 401(k) plans and they reflect the amount of wages and salaries disbursed, but not necessarily earned, during the year. The estimates are prepared, with a few exceptions, at the North American Industry Classification System (NAICS) three-digit industry level.<sup>1</sup>

Wage and salary disbursements accounted for 55 percent of total personal income at the national level in 2007 (see table B, which also shows the relative size of wages paid by industry).

Both the national and the state estimates of wage and salary disbursements are based primarily on the Quarterly Census of Employment and Wages (QCEW), data that originate from the state unemployment insurance (UI) system, and from the UI program for Federal civilian employees. These data are assembled by the Bureau of Labor Statistics (BLS) of the Department of Labor. The data, reported quarterly on Form ES-202, the state UI contribution reports filed by employers in the industries covered by, and subject to, each state's UI laws and by Federal agencies, are tabulated by county and by NAICS six-digit industry. The QCEW data account for 95 percent of wage and salary disbursements as estimated by BEA (table C).

Under most state UI laws, wages and salaries include bonuses, tips, and the cash value of meals and lodging provided by the employer—that is, pay-in-kind.

The estimates of wages and salaries for a few industries are prepared largely or entirely with data other than the QCEW data. These industries are either not covered by state UI or are only partly covered. For three of these industries—support activities for agriculture and forestry; private education; and religious, grantmaking, civic, professional and similar organizations—the estimates are prepared as the sum of (1) an estimate for the fully covered portion of the industry, based on the QCEW data, and (2) an estimate for the incompletely covered portion of the industry, based largely or entirely on other source data, as discussed below.

### **Wages and salaries in industries fully covered by the UI programs**

The national and state estimates of wages and salaries in industries that are fully covered by state UI programs are based on quarterly QCEW data for wages and salaries,

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<sup>1</sup> NAICS has been used since 2001. Previously the Standard Industrial Classification (SIC) was used. In order to provide users with a longer time series of data on a NAICS basis, BEA converted its earnings and employment data, originally compiled on an SIC basis, to a NAICS basis from 1990 to 2000. See “NAICS Earnings and Employment by Industry, 1990-2000” in Chapter XII Technical Notes. See also “Industrial Classification” in Chapter I Introduction.

or payrolls. The national estimates of the wages and salaries of federal civilian employees, covered by the Federal UI program, are also based predominately on QCEW. Because the QCEW data do not precisely meet BEA's statistical and conceptual requirements, the data must be adjusted to provide complete coverage of all components of wages and salaries and the wages of all employees (including, for example, the wages of students and elected officials) and the proper industrial and geographic classifications.

**Adjustment for congressional staff wages.**—In the QCEW data for Federal civilian employees, all the wages and salaries for congressional staff are assigned to Washington, DC. However, some of these wages are earned by congressional staff who work in the state offices of the members of Congress. BEA assumes that 25 percent of the total congressional payrolls are earned by congressional staff in state offices, so this percentage of these payrolls is allocated to states in proportion to their congressional representation.

**Adjustment for tax misreporting.**—Approximately \$129 billion of wages and salaries not reported by employers is added to the QCEW data (table C). Because state-level data are unavailable, the national estimate for each industry is allocated to states in proportion to the QCEW payroll data for the industry.

The national estimate for each industry is prepared in two parts: One part is prepared for the payrolls that were underreported by employers, and one part is prepared for the payrolls that were not reported, because employers failed to file a report.<sup>2</sup>

In addition, tips are assumed to be understated in the UI contribution reports from the following industries: health and personal care stores; general merchandise stores; air transportation; railroad transportation; taxicabs, (a part of transit and ground passenger transportation); scenic and sightseeing transportation; couriers and messengers; administrative and support services; waste management and remediation services; amusement, gambling, and recreation industries; accommodation services; food services and drinking places; personal and laundry services; and religious, grantmaking, civic, professional and similar organizations. For each of these industries, the national estimate of the unreported tips, which is derived in the preparation of BEA's input/output accounts for benchmark years and interpolated and extrapolated for other years, is allocated to states in proportion to the QCEW payroll data for the industry (or Railroad Retirement Board data for the railroad transportation industry).

**Adjustments for wages and salaries that are excluded from the QCEW data.**—The QCEW payroll data for some states exclude some of the voluntary employee contributions to certain deferred compensation plans, such as 401(k) plans. The payroll data for Washington State exclude the salaries paid to corporate officers. In addition, the QCEW data for specific industries exclude certain, usually small, amounts of wages and salaries that are not covered by state UI programs.

For years prior to 1998, the voluntary contributions made by employees to deferred compensation plans were not fully reported for all states in the QCEW payroll data. An adjustment to include these contributions was made to each industry at both the national and state levels. The national adjustment was based on data from the Internal Revenue Service Form 5500 (*Annual Return/Report of Employee Benefit Plan*) and was distributed to the 19 states that informed the Bureau of Labor Statistics that they had not

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<sup>2</sup> Robert P. Parker, "Improved Adjustments for Misreporting of Tax Return Information Used to Estimate the National Income and Product Accounts, 1977," *Survey of Current Business* 64 (June 1984): 17-25.

issued explicit reporting requirements for the contributions. The national adjustment for each industry was allocated to those states in proportion to the amount of reported wages and salaries for the industry in those states.

From 1998 forward, the extent of the underreporting of voluntary contributions made by employees to deferred compensation plans has declined to zero for all states except for Alaska. An adjustment for the contributions made by Alaska State government employees since 1996, based on information from the Alaska Department of Labor, is made to the state government payrolls of that state.<sup>3</sup>

The salaries of corporate officers in Washington State, who are exempt by state law from UI coverage, are excluded from the QCEW payroll data for private industries. Therefore, an adjustment is made to include these salaries based on estimates that are provided quarterly by the Washington State Employment Security Department.

The payrolls of railroad carrier affiliates are not included in the data for transportation services, and the payrolls of railway labor organizations are not included in the data for religious, grantmaking, civic, professional and similar organizations. These industry segments are covered by the Railroad Unemployment Insurance system rather than by the state UI system. The employers in these segments file reports that include payroll data with the Railroad Retirement Board, which provides these data to BEA. The data for each employer are then added to the QCEW data for the appropriate industry for the nation and for each state.

The payrolls of some nonprofit organizations are excluded from mandatory UI coverage in most states. Estimates of the payrolls of these small organizations are prepared for various industries. A national estimate of the employment for each industry is received from the Bureau of Labor Statistics.<sup>4</sup> The national estimate of the wages and salaries for each industry is derived as the product of the employment estimate and the annual average wages and salaries of the UI-covered employees in the industry. The national estimate for the organizations in each industry is allocated to states in proportion to the QCEW payroll data for the industry.

The wages and salaries of students and spouses of students who are employed by the institutions of higher education in which the students are enrolled are excluded from the QCEW payroll data for private, state government, and local government educational institutions. However, employment data that include the student employees of private institutions are published annually in *County Business Patterns* and employment data that include the student employees of government institutions are available from the Census Bureau's State and Local Government Employment and Payroll web site. The national and state estimates of the wages of student and spousal employees therefore are estimated as the product of the number employed in private and government institutions and an average wage of part-time government employees obtained from the Census Bureau's Governments Division.

The pay-in-kind of members of religious orders who teach at private colleges and universities is excluded from the QCEW payroll data for private education. The national

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<sup>3</sup> Beginning with 1996, employers in Alaska are no longer required to include the employee contributions in the reported wages and salaries.

<sup>4</sup> The presumed non-covered employment is derived from the Current Employment Statistics (CES) survey which is provided by the National Benchmark Branch Division of CES, Office of Industry Employment Statistics, Bureau of Labor Statistics.

estimate of pay-in-kind is distributed to states in proportion to the number of full-time teachers who are members of religious orders, as reported in the “General Summary” of the *Official Catholic Directory*.<sup>5</sup>

The pay-in-kind of workers in private hospitals who do not receive cash wages are excluded from the QCEW data for private hospitals; these workers are mainly interns, student nurses, and members of religious orders. The national estimate of pay-in-kind of these workers is allocated to states in proportion to QCEW employment for private hospitals. A national estimate of their wages is derived as the product of an employment estimate from the Bureau of Labor Statistics and the annual average wage of UI-covered employees in the hospital industry. This national estimate of wages is allocated to states in proportion to QCEW wages for private hospitals.

The salaries of certain employees of state and local governments—primarily elected officials, members of the judiciary, and interns employed by government-operated hospitals—are excluded from the QCEW payroll data for state and local government employees. The national and state estimates are based on employment data from the BLS Current Employment Statistics program.

The commissions received by certain employees, primarily insurance solicitors, are excluded from the QCEW data. A national estimate of the wages and salaries of these employees is derived as the product of an employment estimate from the Bureau of Labor Statistics and the annual average wage of UI-covered employees in the insurance industry.<sup>6</sup> The national estimate is allocated to states in proportion to the QCEW payroll data for the insurance industry.

As part of the 2003 comprehensive revision of the national income and product accounts, three components of personal income that were included in other labor income were moved to wage and salary disbursements. The three components are fees paid to jurors and witnesses, compensation of prisoners, and marriage fees paid to justices of the peace.

The national estimates of the fees paid to jurors and witnesses are based on data from the Budget of the United States Government and from the Census Bureau’s annual *State Government Finances*. The estimates are allocated to states using BEA’s estimates of wages paid to state government employees, excluding education.

The national estimates of the compensation of prisoners are based on data provided by the Department of Justice. The national estimate is allocated to states on the basis of wages paid to prison employees. Compensation paid to federal prisoners is allocated only to those states that have a Federal prison.

In the absence of source data, marriage fees paid to justices of the peace are arbitrarily assumed to be a constant \$10 million. The national estimate is allocated to

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<sup>5</sup> “General Summary,” *Official Catholic Directory* (New York: P.J. Kenedy and Sons). The *Directory* is published annually. The “General Summary” is a tabulation of the number of members of religious orders who are employed in Catholic institutions in each diocese and in each state. The data are classified by clerical title and by religious assignment. The data for the Archdiocese of Washington, DC, which includes the nearby suburban counties in Maryland, are apportioned between the District of Columbia and Maryland on the basis of the detailed information in the *Directory*.

<sup>6</sup> The presumed non-covered employment is derived from the Current Employment Statistics Survey (CES) which is provided by the National Benchmark Branch Division of CES, Office of Industry Employment Statistics, Bureau of Labor Statistics.

states based on BEA estimates of wages paid to local government employees, excluding education.

## **Wages and salaries in industries not fully covered by the state UI programs**

The estimates of wages and salaries for eight industries are primarily based on data other than QCEW data. For five industries—farms, farm labor contractors, private households, private elementary and secondary schools, and religious membership organizations—there is full UI coverage in only a few states. The other three industries—railroads, military, and other—are not covered by any state UI program. In addition, because these estimates are primarily based on data that do not include wages paid in kind, an estimate of pay-in-kind is prepared for these industries (except farm labor contractors, railroads, and other). The national estimate of pay-in-kind for each industry is identical to the imputed value of the goods and services furnished without charge by employers to their employees, as estimated for inclusion in personal consumption expenditures.<sup>7</sup>

**Farms.**—Wages and salaries for farms consist of the cash wages and pay-in-kind of hired farm labor and the salaries received by the owner-operators of farm sole proprietorships, partnerships, and family-held corporations.<sup>8</sup> The national and state estimates of the cash wages and pay-in-kind of hired farm labor are based on the estimates of farm labor expenses that are prepared by the U.S. Department of Agriculture (USDA) as part of its estimates of farm income.<sup>9</sup> The national and state estimates of the salaries of owner operators are based on unpublished data from the USDA.

**Farm labor contractors.**—Farm labor contractors are classified in support activities for agriculture and forestry. Farm labor contractors and their employees are only partially covered by UI laws in most states. However, in Arizona and California, all of the employees are covered. The national estimates are based on data for contract farm labor expenses from the 1992 and 1997 Censuses of Agriculture. For Arizona and California, the QCEW reported wages are used as the estimates. The estimates for the other states for 1992 and 1997 are based on the data for contract farm labor expenses from the censuses of agriculture for those years. The estimates for 1993-96 are based on straight-line interpolations between the 1992 and 1997 data, and the 1997 data are used to prepare the estimates for 1998-2007.

**Private households.**—The national estimates of the cash wages paid to the employees of private households are based on data from the Current Population Survey. The state estimates of cash wages are based on a special tabulation of journey-to-work (JTW) data from the 2000 Census of Population. The wage data are extrapolated by the annual change in population. The extrapolated series for each year is adjusted

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<sup>7</sup> See (1) food furnished to employees, including military and domestic service, (2) standard clothing issued to military personnel, and (3) employees' lodging, lines 171-173 in Table 7.12, "Imputations in the National Income and Product Accounts," *Survey of Current Business* 87 (August, 2007): 163.

<sup>8</sup> Family-held corporations are those qualified under the Internal Revenue Code subchapter S.

<sup>9</sup> The USDA state estimates of farm labor expenses exclude the salaries received by the owner-operators; these salaries are treated as part of the return to capital. The BEA treatment of the salaries received by owner-operators of farms is different from the treatment of salaries received by owner-operators of nonfarm enterprises. Their salaries are included in nonfarm proprietors' income.

proportionately to sum to the national estimate of cash wages. The national estimates of pay-in-kind are distributed to the states using JTW place-of-work data on private household employment. The employment data are extrapolated from 2000 using a method similar to that used for wages.

**Private elementary and secondary schools.**—The private elementary and secondary school industry is partially covered by state UI programs, but it is treated as if it were not covered, because religiously affiliated schools, which are exempt from state UI coverage, account for most of the wages and salaries for this industry. The national and state estimates of cash wages are based on annual payroll data reported in *County Business Patterns*.<sup>10</sup> The national estimate of the pay-in-kind for these schools is distributed to states on the basis of the number of full-time teachers in religious orders.<sup>11</sup>

**Religious membership organizations.**—The national and state estimates of cash wages for religious membership organizations are based on payroll data reported for these organizations in *County Business Patterns*. The estimate of pay-in-kind for religious membership organizations reflects the value of the food, laundering, lodging, and miscellaneous items received by members. The national estimate for religious pay-in-kind is allocated to the states based on employment levels for religious membership organizations found in *County Business Patterns*.

**Railroads.**—The national and state estimates of the wages and salaries paid by railroad companies, which are not covered by the state UI system, are based on wage and salary data from the Railroad Retirement Board (RRB). The RRB data that are used for the state estimates represent the wages and salaries subject to the payroll tax that supports the railroad retirement system; these data are tabulated according to the state of residence of the employee. The data are adjusted (1) to reflect the portion of the wages and salaries not subject to the tax and (2) to convert them to a place-of-work basis. The former adjustment is based on the RRB-reported number of employees living in each state whose wages or salaries exceed the limit for retirement taxation. The latter adjustment is based on JTW data for railroad employees from the 2000 census.

**Military.**—Wages and salaries for the military services consist of cash wages (including allowances) of full-time personnel of the armed services (including the Coast Guard), cash wages of the members of the Reserves including the National Guard, and pay-in-kind received by the full-time and reserve enlisted personnel of the armed services.<sup>12</sup>

The national estimates of the cash wages of the military services are based on data from the budget of the United States.

The state estimates of cash wages of the full-time personnel of the Army, the Navy, the Air Force, and the Marine Corps are prepared in three steps. First, approximations of quarterly cash wages are calculated for subgroups of personnel—for officers and for enlisted personnel in the Navy and Marine Corps and for each pay grade of the Army and the Air Force. The approximations are derived from quarterly averages

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<sup>10</sup> The *County Business Patterns* data are tabulated from the administrative records of the Old-age, Survivors, and Disability Insurance program. This program exempts nonprofit religious organizations, such as these schools, from mandatory coverage, but its provisions for elective coverage have resulted in the participation of most of these schools.

<sup>11</sup> *Official Catholic Directory*. See footnote 6.

<sup>12</sup> The estimates of pay-in-kind reflect the value of the food and standard-issue clothing received by enlisted personnel.

of monthly data on the number of military personnel at each installation and from national annual data on average pay for each subgroup from the Department of Defense.<sup>13</sup> The quarterly average number of personnel are summed over all installations in each county to obtain the quarterly average number of personnel for each subgroup, and then multiplied by the national annual average pay (for example, the number of Navy officers in each county is multiplied by the national average pay of Navy officers).

Second, the approximations of the quarterly cash wages for each subgroup in each county are summed to obtain county approximations, and the county approximations for each service are summed to obtain state approximations for each service. Third, the quarterly state approximations for each service are averaged to yield calendar year approximations, which are then adjusted proportionately to sum to the national estimates.

The national estimate of cash wages for the full-time personnel of the Coast Guard is allocated to states in proportion to an annual summation of monthly Coast Guard payroll from the Department of Homeland Security.

The national estimate of wages for the Reserves for each calendar year is allocated to states in proportion to payroll data for the calendar year from the Budget Appendix from the Office of Management and Budget.

The national estimate of the pay-in-kind of full-time personnel in the Coast Guard is allocated to the states in proportion to the number of enlisted personnel in the Coast Guard reported by the Department of Homeland Security, and the national estimate for each of the other services is allocated by the number of enlisted personnel in each service reported by the Department of Defense. The national estimate for the Reserves is allocated to states in the proportion to the estimates of cash pay.

**Other.**—Other wages and salaries consist of the wages and salaries of U.S. residents who are employed by international organizations and by foreign embassies and consulates in the United States. The national estimates are prepared by BEA as part of the balance of payments accounts. The national estimates for all years are allocated to states in proportion to estimates of the administrative expenditures of these organizations in 1968.

## Alternative measure of wages

Another measure of wages by place of work is the payroll data published in the Census Bureau's *County Business Patterns* (CBP). It differs in source data and coverage from BEA's wage and salary disbursements and QCEW wages.<sup>14</sup>

The CBP data are derived from Census Bureau business establishment surveys and Federal administrative records.

The coverage of the CBP data differs from that of the QCEW data primarily because the CBP data exclude most government employees, while the QCEW data cover civilian government employees.<sup>15</sup> CBP data also exclude several private industries

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<sup>13</sup> The Army and the Air Force provide average base pay; the Navy and Marine Corps provide average base pay and allowances.

<sup>14</sup> See table C.

<sup>15</sup> The CBP data cover only those government employees who work in government hospitals, federally chartered savings institutions and credit unions, retail liquor stores, wholesale liquor establishments and university publishers. QCEW data in most states exclude state and local elected officials, members of the

covered at least in part by the QCEW: crop and animal production; rail transportation; insurance and employee benefit funds; trusts, estates, and agency accounts; and private households. However, the CBP data cover the employees of educational institutions, membership organizations, and small nonprofit organizations in other industries more completely than the QCEW data.<sup>16</sup>

Beginning in 2001, QCEW includes employees of Indian tribal governments and enterprises in local government. These employees were previously included in the relevant private industries.<sup>17</sup> In the CBP data, these employees are still classified in private industries.

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judiciary, state national and air national guardsmen, temporary emergency employees, and those in policy and advisory positions.

<sup>16</sup> Some religious elementary and secondary schools are not covered by QCEW because of a 1981 Supreme Court decision stating “schools operated and supported by churches and not separately incorporated [are] held exempt from unemployment compensation taxes.” College students (and their spouses) employed by the school in which they are enrolled and student nurses and interns employed by hospitals as part of their training are also excluded from QCEW. While QCEW coverage varies, half of the states only include nonprofit organizations with four or more employees during twenty weeks in a calendar year.

<sup>17</sup> For example, employees of casinos owned by tribal councils were included in the North American Industry Classification System subsector “Amusement, Gambling, and Recreation Industries.”